V.A.5.N.k.20. PHALARIS ARUNDINACEA SEASONALLY FLOODED HERBACEOUS ALLIANCE
Reed Canary Grass Seasonally Flooded Herbaceous Alliance

Alliance Identifier: A.1381
Phalaris arundinacea Western Herbaceous Vegetation
Reed Canary Grass Western Herbaceous Vegetation
Reed Canary Grass Wet Meadow

ELEMENT CONCEPT

GLOBAL SUMMARY: This association is reported from throughout Montana, Idaho, northeastern Utah, and the Columbia Basin of Washington, but is likely more widespread in the western United States. Its distribution as a natural type is complicated because this native species is widely cultivated as a forage crop and has escaped and established in wetlands and riparian areas, displacing the local flora. Elevations range from near sea level to 1700 m. Stands are found along riparian areas, pond and lake margins, wet meadows, and intermittent drainages. Soils are commonly fine-textured and may be flooded for brief to extended periods. The vegetation is characterized by a dense, tall herbaceous layer (often >80% canopy cover and1.5-2 m tall) that is dominated by *Phalaris arundinacea*, which tends to occur in monocultures. Associated species may include *Equisetum arvense, Muhlenbergia asperifolia, Mentha arvensis, Schoenoplectus acutus*, and many other species in trace amounts where disturbed. Introduced species such as *Lepidium latifolium, Cirsium arvense, Sonchus oleraceus, Euphorbia esula*, and *Phleum pratense* are common in some stands.

ENVIRONMENTAL DESCRIPTION

USFWS WETLAND SYSTEM: PALUSTRINE / RIPARIAN

Ouray National Wildlife Refuge Environment: The two stands of *Phalaris arundinacea* Western Herbaceous Vegetation occupy an intermittent drainage, just inside the Refuge boundary. Both stands are located in the bottom of the drainage and are characterized by the strong odor of selenium. In years prior to this study, water was ponded in this drainage to provide waterfowl habitat, but the practice has been discontinued because high levels of selenium were/are present. Both stands are nearly monotypic and consist of very tall plants which serve as bedding/resting areas for deer. Both stands of *Phalaris arundinacea* Western Herbaceous Vegetation lie adjacent to *Typha angustifolia* stands which occupy slightly deeper water in the drainage.

Global Environment: This association is reported from throughout Montana, Idaho, Washington and northeastern Utah, but is likely more widespread in the western United States. Elevations range from near sea level to 1700 m. Stands are found along riparian areas, pond and lake margins, wet meadows, and intermittent drainages. Sites are flat to rolling. Soils are commonly fine-textured, but can be coarser in texture. Subsoil is often mottled and gleyed (Crawford 2001). Sites are generally flooded during the growing season, but flooding can vary from brief to extended periods.

VEGETATION DESCRIPTION

Ouray National Wildlife Refuge Vegetation: *Phalaris arundinacea* is the dominant species in both nearly monotypic stands. This grass is very tall, exceeding 2 meters in height, and dense, approaching 90% foliar cover. Only *Schoenoplectus acutus* and *Muhlenbergia asperifolia* are present in the stands in any quantity, e.g., from 1-5% foliar cover. Other species noted in the stands, but in trace amounts, include *Polypogon monspeliensis, Lepidium latifolium, Cirsium arvense, Sonchus oleraceous,* and *Lactuca serriola*, all relatively weedy plant species. All of these additional species are present in the smaller *Phalaris arundinacea* stand, which is located south of the Hatchery Road approximately 0.5 miles.

Global Vegetation: This association is characterized by a dense, tall herbaceous layer (often >90% canopy cover and 1.5-2 m tall) that is dominated by *Phalaris arundinacea*, which tends to occur in monocultures. Associated species such as *Equisetum arvense, Muhlenbergia asperifolia, Mentha arvensis, Schoenoplectus acutus, Polygonum amphibium, Euthamia canadensis, Urtica dioica*, and many other species may be present in trace amounts especially where disturbed. Occasional *Populus tremuloides, Salix exigua, Rubus idaeus*, or *Symphoricarpos albus* may be present in some stands. Introduced species such as *Lepidium latifolium, Cirsium arvense, Sonchus oleraceus, Euphorbia esula, Poa pratensis*, and *Phleum pratense* are common in some disturbed stands.

Dynamics: *Phalaris arundinacea* produces abundant herbage and is planted for livestock forage. It is tolerant of moderate grazing by livestock, although heavy grazing will reduce density (Hansen et al. 1995). *Phalaris arundinacea* is a threat to riparian and wetland areas because it spreads rapidly from rhizomes, dominating the sites, and is extremely difficult to remove once established (Hansen et al. 1995). Fire has been used with limited success to control the spread of *Phalaris arundinacea*, but the high water table where it grows makes it difficult to burn during the growing season (Hansen et al. 1995) .

Von Loh (2000) found stands growing on selenium-rich sites. It is not known if selenium is translocated into the plant tissue.

MOST ABUNDANT SPECIES

Ouray National Wildlife Refuge

Stratum	**Species**
GRAMINOID	*Phalaris arundinacea, Scirpus acutus, Muhlenbergia asperifolia*

Global

Stratum	**Species**
GRAMINOID	*Phalaris arundinacea*

CHARACTERISTIC SPECIES

Ouray National Wildlife Refuge
Species
Phalaris arundinacea, Muhlenbergia asperifolia, Schoenoplectus acutus

Global
Species
Phalaris arundinacea

OTHER NOTEWORTHY SPECIES

Ouray National Wildlife Refuge

Stratum	**Species**
N/A	

Global

Stratum	**Species**
N/A	

GLOBAL SIMILAR ASSOCIATIONS:
Calamagrostis canadensis - Phalaris arundinacea Herbaceous Vegetation (CEGL005174)
Phalaris arundinacea Eastern Herbaceous Vegetation (CEGL006044)

SYNONYMY:
Phalaris arundinacea Habitat Type (Hansen et al. 1995)
Phalaris arundinacea Habitat Type (Hall and Hansen 1997)
Phalaris arundinacea Association (Crawford 2001)
Phalaris arundinacea Monotype (Muldavin et al. 2000a)

CLASSIFICATION COMMENTS

Ouray National Wildlife Refuge: N/A

Global Comments: Other natural associations included in this alliance are found throughout the northeastern United States, but this western association's distribution as a natural type is not clear because of extensive planting as a forage crop (Hansen et al. 1995, Hall and Hansen 1997). Further work is required to resolve the natural versus introduced nature of this type in western North America.

ELEMENT DISTRIBUTION

Ouray National Wildlife Refuge Range: *Phalaris arundinacea* plants are found intermixed with other emergent wetland species, particularly *Typha* spp., at various sites around the Refuge; a small stand was observed in Leota Bottom. However, two stands, which meet the minimum mapping unit of 0.5 hectares, are present in the unnamed drainage near the main Refuge entryway, near State Highway 88.

Global Range: This association is reported from throughout Montana and Idaho and into northeastern Utah and is likely more widespread in the western United States. Its distribution as a natural type is complicated because this native species is widely cultivated as a forage crop and has escaped and established in many wetlands and riparian areas.

Nations: US
States/Provinces: ID MT NM UT
TNC Ecoregions: 10:C, 19:C, 26:C, 6:C
USFS Ecoregions: 313B:C?, 313E:C?, 331D:CC, 331G:CC, 331J:C?, 341C:CC, 342I:CC, M332D:CC, M333A:CC, M333B:CC, M333C:CC, M333D:CC
Federal Lands: USFWS (Ouray)

ELEMENT SOURCES

Identifier: CEGL001474 **Confidence:** 1 **Conservation Rank:** G5
REFERENCES: Cooper et al. 1995, Crawford 2001, Hall and Hansen 1997, Hansen et al. 1995, Muldavin et al. 2000a, Von Loh 2000.